

Online Experiments for Language Scientists

Lecture 7: Priming and overspecification

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Questions about Undergraduate Assessment 1?

Ask now!

Office hours for OELS questions:

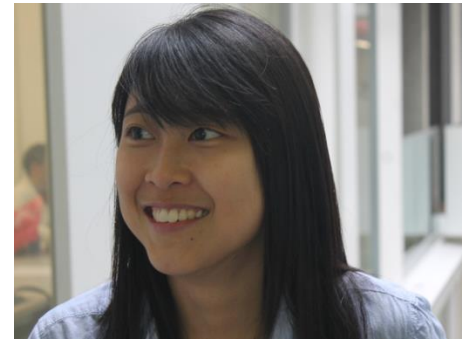
- 11-12 Wednesday 30th, 10-11 Thursday 31st
- Last chance for question: 10am on Monday 4th November!

Loy & Smith (2021)

Loy, J. E., & Smith, K. (2021). Speakers Align With Their Partner's Overspecification During Interaction. *Cognitive Science*, 45, e13065.

5 confederate priming experiments

- Do people copy their partner's tendency to **overspecify**?



Jia Loy

(now works in industry)

Priming

Priming: people repeat what they have recently heard or produced

Structural priming: people repeat abstract structures they have recently heard or produced

E.g. Bock, J. K. (1986). Syntactic persistence in language production. *Cognitive Psychology*, 18, 355-387.

PRIMING SENTENCES

ACTIVE:

**ONE OF THE FANS
PUNCHED THE
REFEREE.**

PREPOSITIONAL:

**A ROCK STAR SOLD
SOME COCAINE TO AN
UNDERCOVER AGENT.**

PASSIVE:

**THE REFEREE WAS
PUNCHED BY ONE
OF THE FANS.**

DOUBLE OBJECT:

**A ROCK STAR SOLD
AN UNDERCOVER AGENT
SOME COCAINE.**

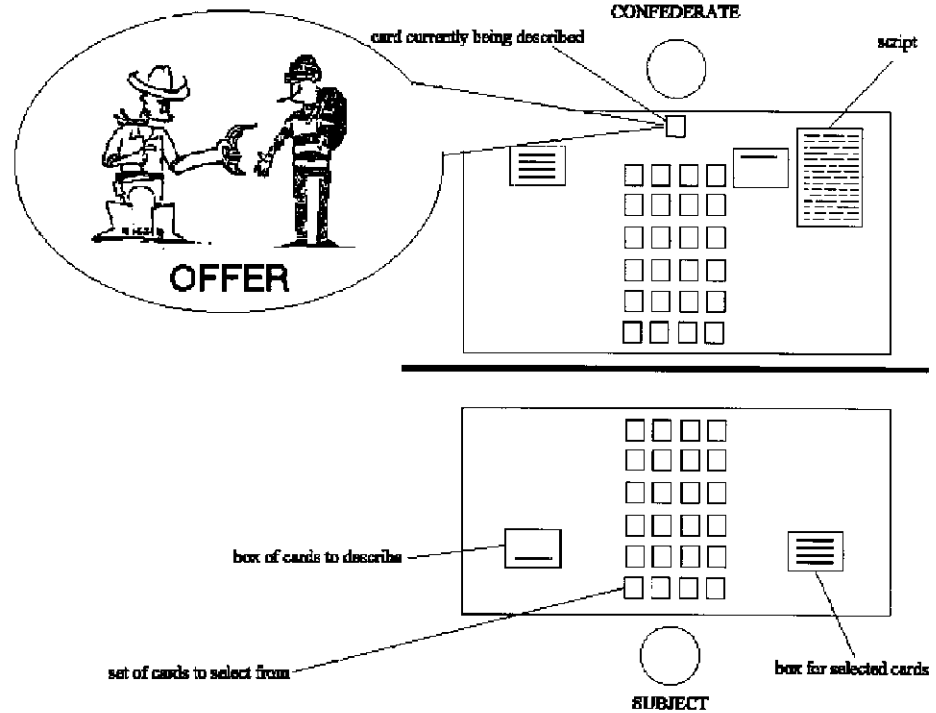
TARGET PICTURES



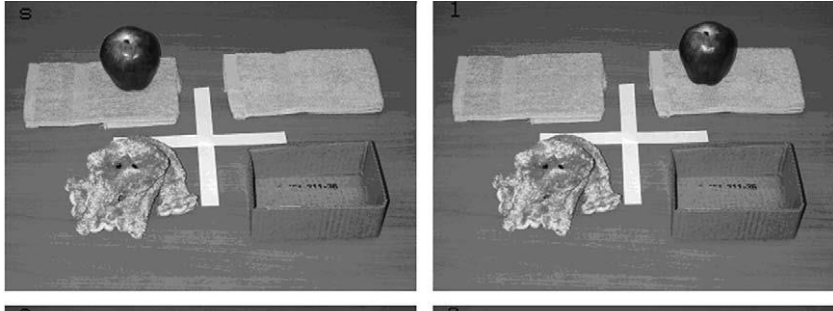
Confederate priming

Confederate: “a person one works with, especially in something secret or illegal; an accomplice”

Branigan, H. P., Pickering, M. J., & Cleland, A. A. (2000). Syntactic coordination in dialogue. *Cognition*, 75, B13-25.



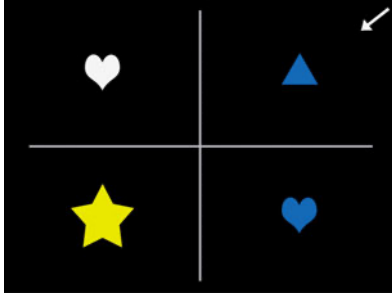
Overspecification



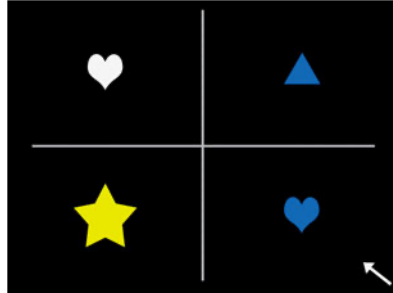
“Put the apple in the box”

“Put the apple that’s on the towel in the box”

A. No modifier required.



B. Modifier required.

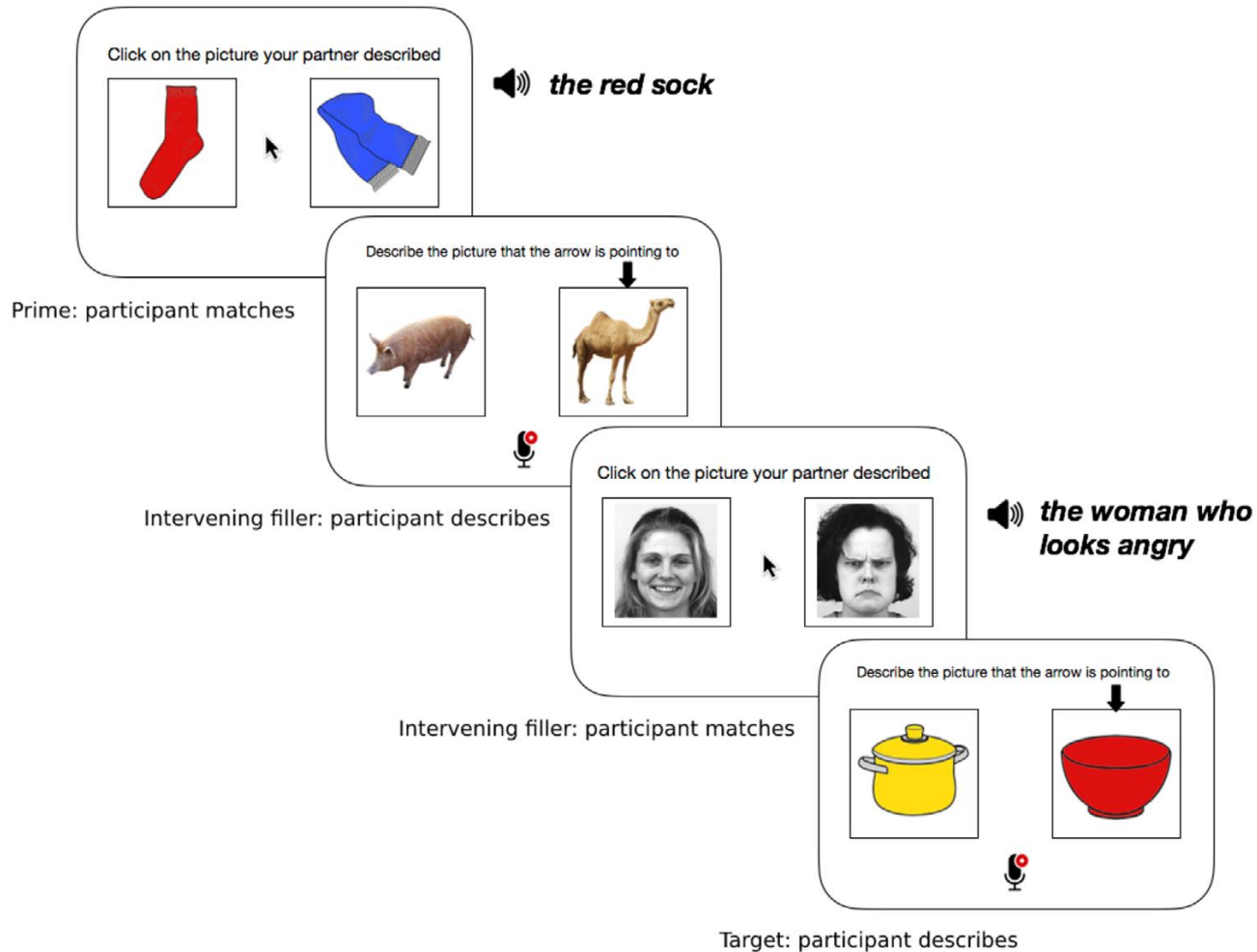


“The (blue) triangle”

“The (small) blue heart”

Engelhardt, P. E., Bailey, K. G. D., & Ferreira, F. (2006) Do speakers and listeners observe the Gricean Maxim of Quantity? *Journal of Memory and Language*, 54, 554-573.

Engelhardt, P. E., & Ferreira, F. (2014) Do speakers articulate over-described modifiers differently from modifiers that are required by context? Implications for models of reference production. *Language, Cognition and Neuroscience*, 29, 975-985



Demo using this week's practical code

Loy & Smith: manipulating partner's tendency to overspecify

Exps 1, 2: colour, partner either consistently overspecifies (uses colour adjectives) or not (uses bare nouns)

Exp 3: size, partner either consistently overspecifies (uses size adjectives) or not (uses bare nouns)

Exp 4, 5: colour, partner switches behaviour mid-way through experiment

Loy & Smith sample size etc

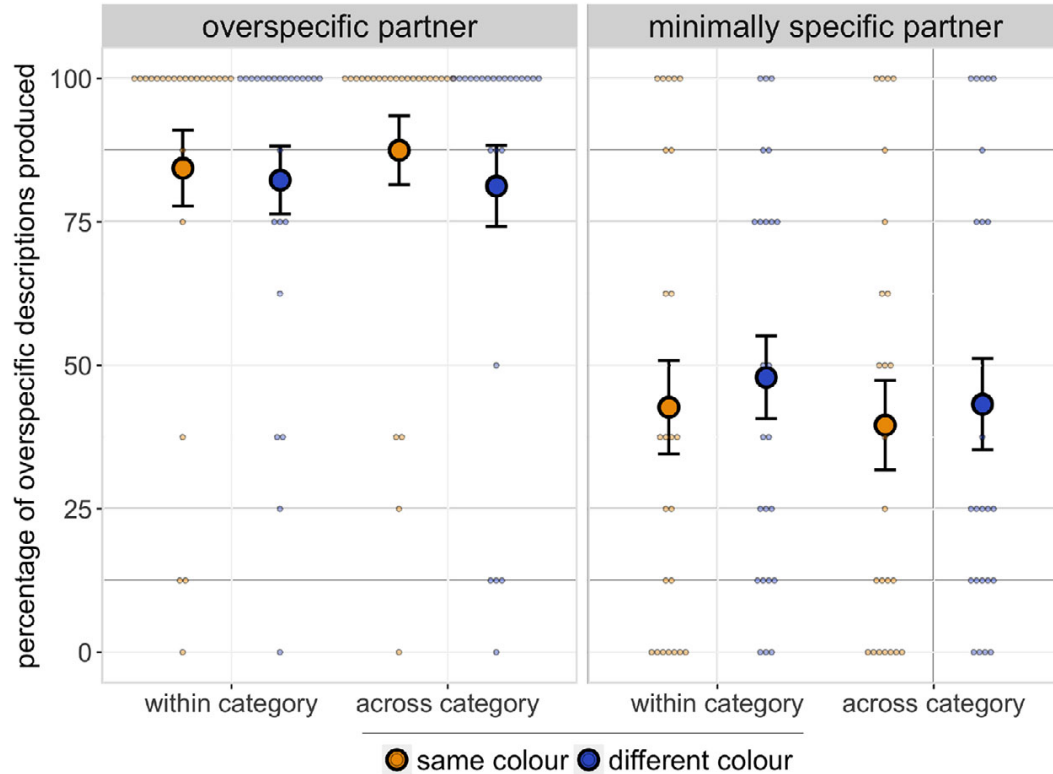
Exp 1: lab-based

- N=24 per condition after exclusions
- Paid £6

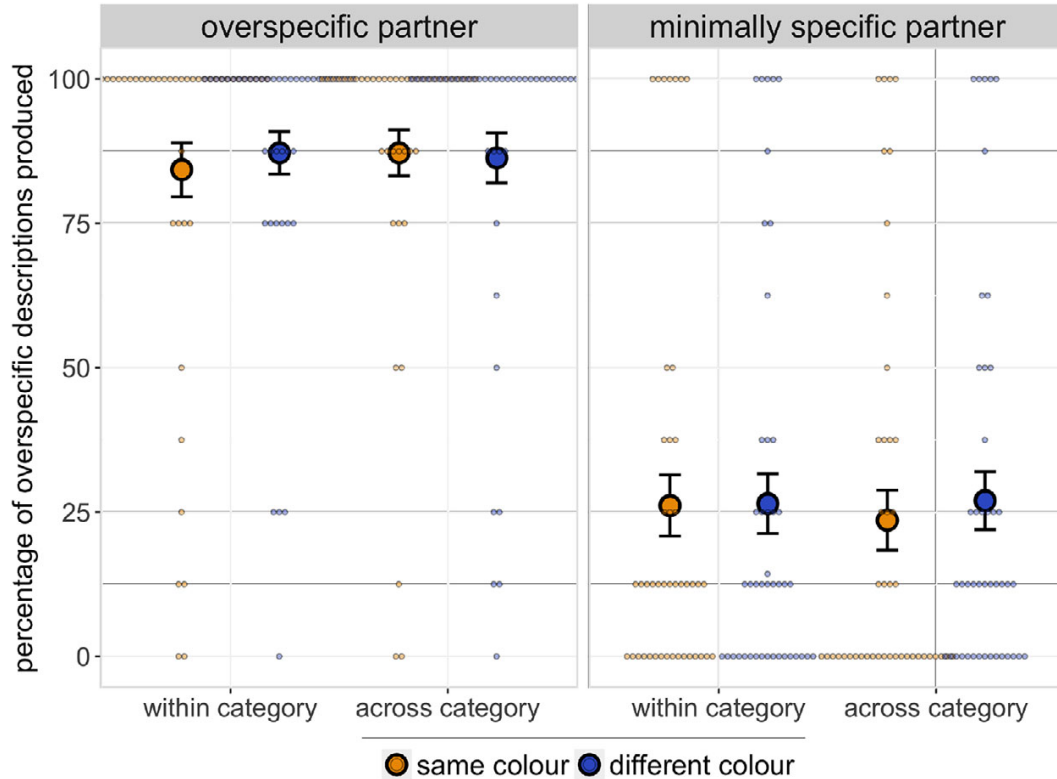
Exps 2-5: MTurk

- N≈50 per condition after exclusions
- Paid \$6

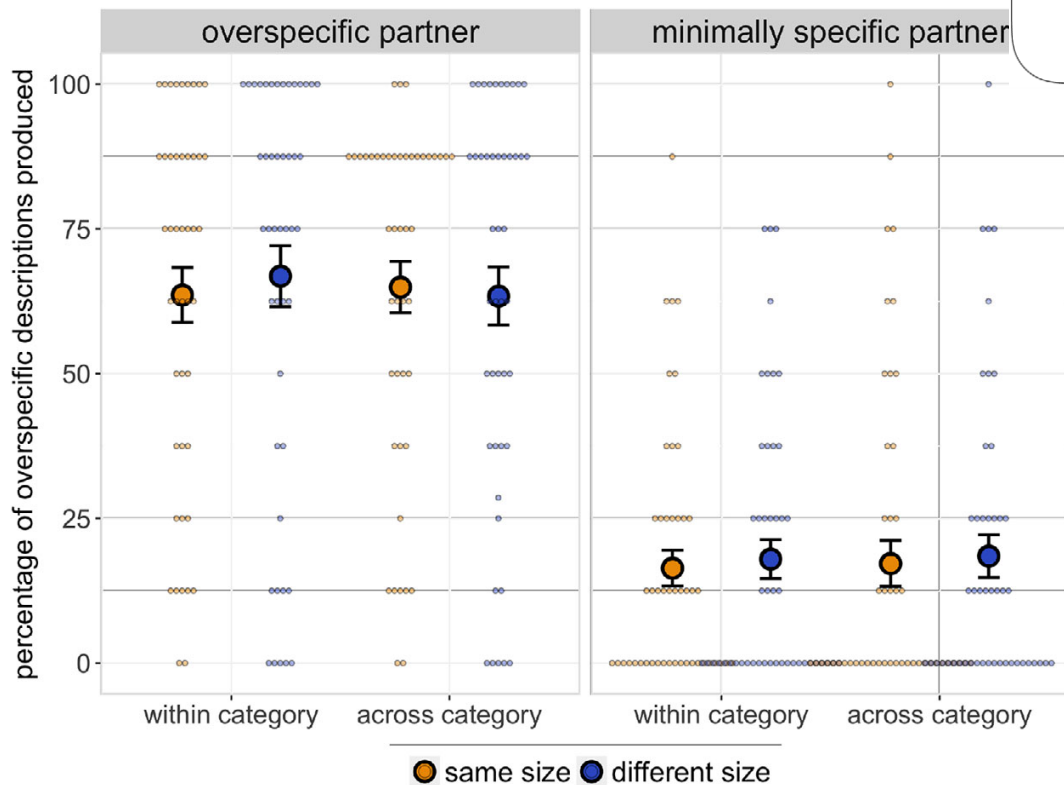
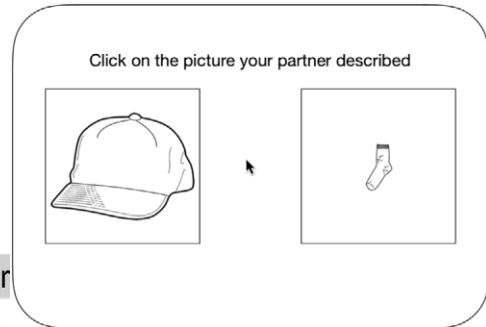
Exp 1: lab, colour



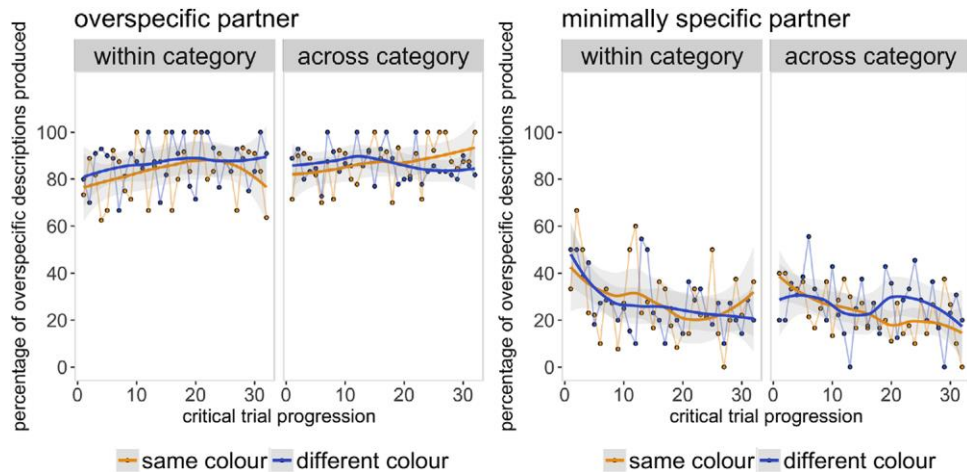
Exp 2: online, colour



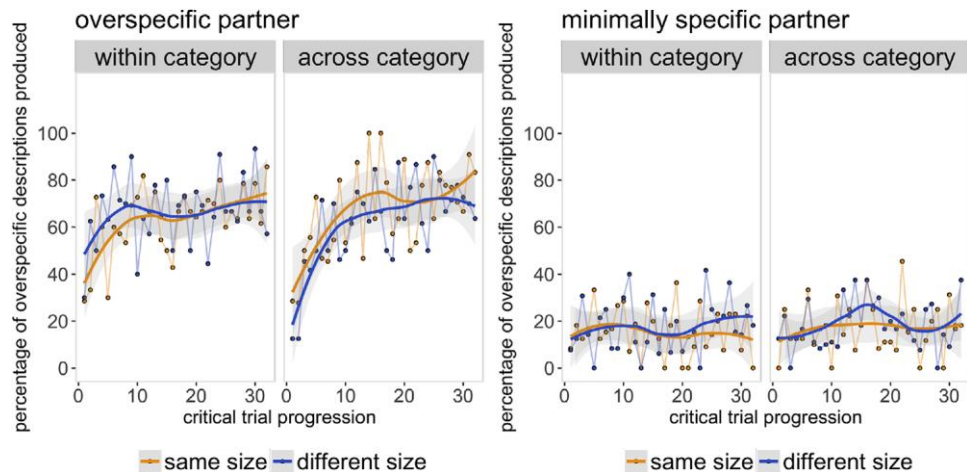
Exp 3: online, size



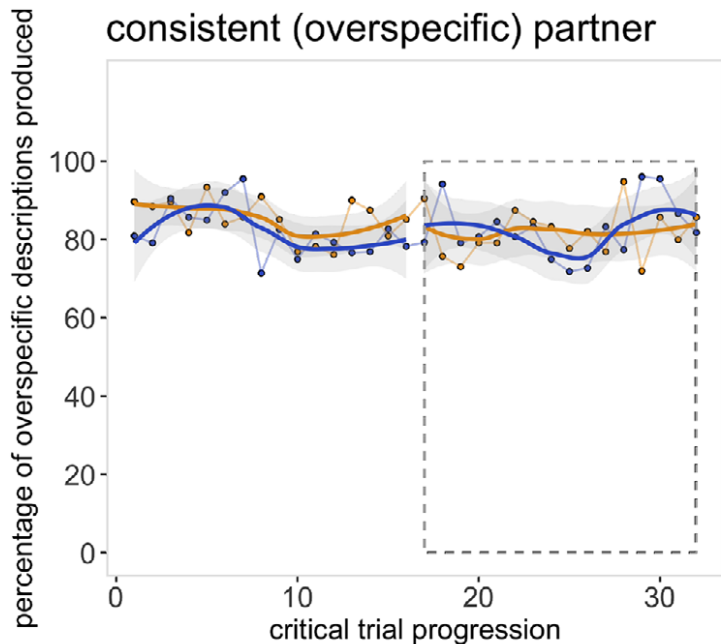
Colour



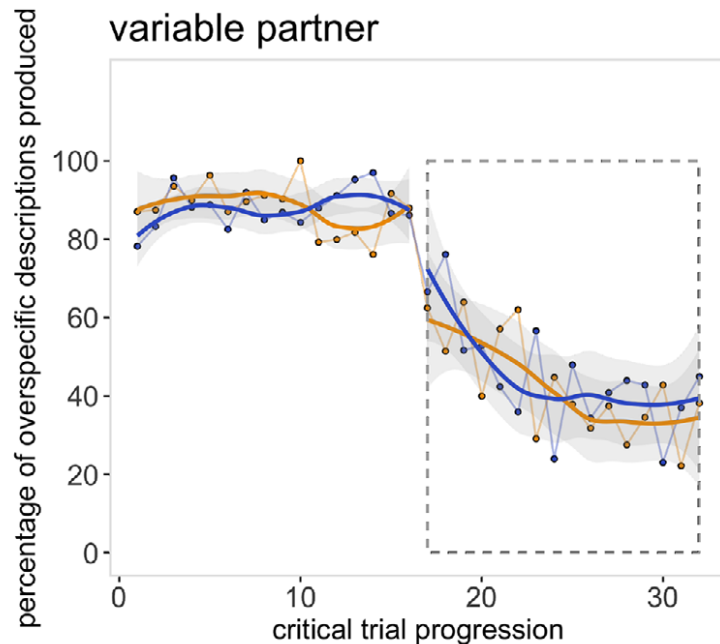
Size



Exp 4: online, colour, partner **switches** from overspecific to minimally specific

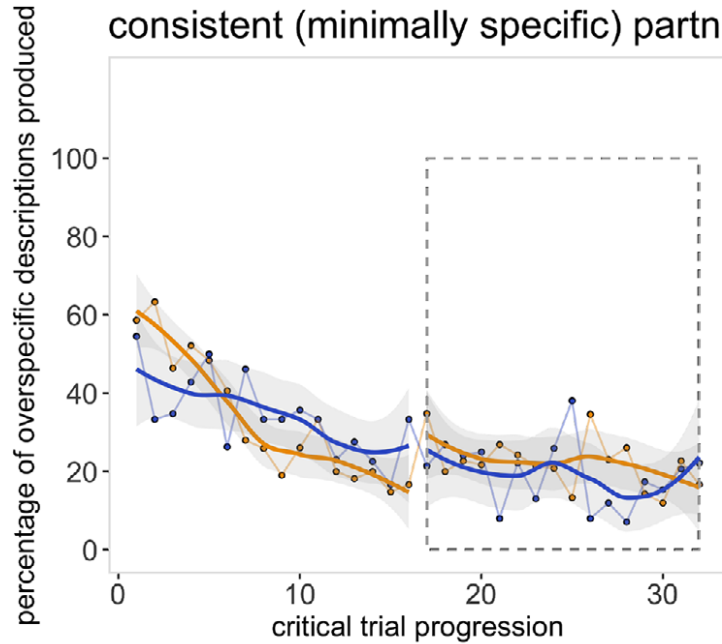


— same colour — different colour

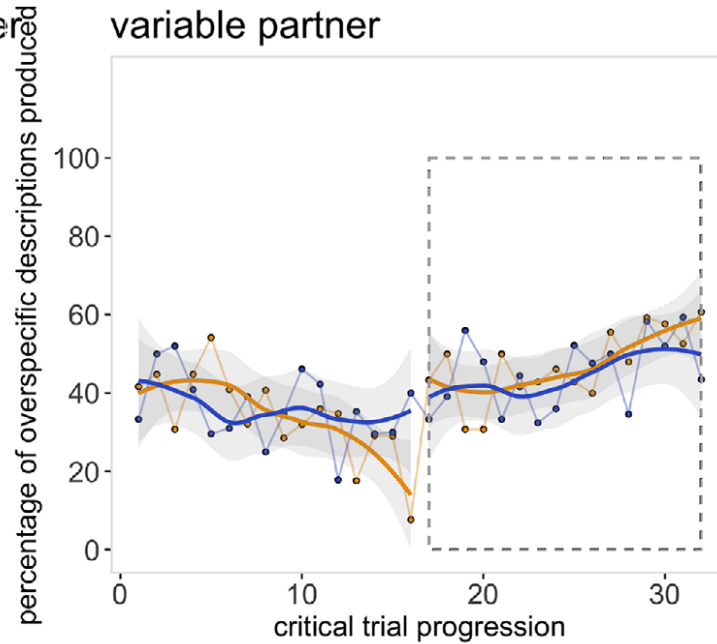


— same colour — different colour

Exp 5: online, colour, partner **switches** from minimally specific to overspecific



— same colour — different colour



— same colour — different colour

Loy & Smith's conclusions

People follow their partner in overspecifying (or not)

- Including if their partner switches behaviour mid-way through the experiment

Social effects are a large constraint on people's tendency to behave in an optimally efficient manner in communication

Time for Q&A/discussion on this week's reading

Next up

Lab

- A confederate priming experiment, recording spoken responses

Next week

- Language evolution by iterated learning